Amendments to the Claims:

The listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

What is claimed is:

169. A process for determining whether a chemical compound is a human melanin concentrating hormone (MCH1) receptor antagonist which comprises contacting cells transfected with and expressing DNA encoding the human MCH1 receptor with the compound in the presence of a known human MCH1 receptor agonist, under conditions permitting the activation of the human MCH1 receptor, and detecting a decrease in human MCH1 receptor activity, so as to thereby determine whether the compound is a human MCH1 receptor antagonist; wherein the human MCH1 receptor is an isolated nucleic acid consisting essentially of a nucleic acid encoding a human MCH1 receptor containing consecutive amino acids, the sequence of which is identical to the sequence of the human MCH1 receptor encoded by the consecutive nucleotides having a sequence beginning with the start codon at positions 1-3, or the start codon at positions 16-18, and ending at the stop codon at positions 1267-1269 as indicated in Figure 1 (SEQ ID NO: 1) and which is activated by melanin concentrating hormone.

170. A process for determining whether a chemical compound specifically binds to and inhibits activation of a human melanin concentrating hormone (MCH1) receptor, which comprises separately contacting cells

expressing on their cell surface the human MCH1 receptor and producing a second messenger response upon activation of the human MCH1 receptor, wherein such cells do not normally express the human MCH1 receptor, with both the chemical compound and a second chemical compound known to activate the human MCH1 receptor, and with only the second chemical compound, under conditions suitable for activation of the human MCH1 receptor, and measuring the second messenger response in the presence of only the second chemical compound and in the presence of both the second chemical compound and the chemical compound, a smaller change in the second messenger response in the presence of both the chemical compound and the second chemical compound than in the presence of only the second chemical compound indicating that the chemical compound inhibits activation of the human MCH1 receptor; wherein the human MCH1 receptor is an isolated nucleic acid consisting essentially of a nucleic acid encoding a human MCH1 receptor containing consecutive amino acids, the sequence of which is identical to the sequence of the human MCH1 receptor encoded by the consecutive nucleotides having a sequence beginning with the start codon at positions 1-3, or the start codon at positions 16-18, and ending at the stop codon at positions 1267-1269 as indicated in Figure 1 (SEQ ID NO: 1) and which is activated by melanin concentrating hormone.

171. The process of claim 170, wherein the second messenger response comprises chloride channel activation and the change in second messenger response is a smaller increase in the level of inward chloride current in the presence of both the chemical compound and the second chemical compound than in the presence of only the second chemical compound.

172. The process of claim 170, wherein the second messenger response comprises inositol phosphate release and the change in second messenger response is a smaller increase in the level of inositol phosphate release in the presence of both the chemical compound and the second chemical compound than in the presence of only the second chemical compound.

173. The process of claim 170, wherein the second messenger response comprises intracellular calcium levels and the change in second messenger response is a smaller increase in intracellular calcium levels in the presence of both the chemical compound and the second chemical compound than in the presence of only the second chemical compound.

174. A method of screening a plurality of chemical compounds not known to inhibit the activation of a human melanin concentrating hormone (MCH1) receptor to identify a compound which inhibits the activation of the human MCH1 receptor, which comprises:

(a) contacting cells transfected with and expressing the human MCH1 receptor, wherein such cells do not normally express the human MCH1 receptor, with the plurality of compounds in the presence of a known human MCH1 receptor agonist, under conditions permitting activation of the human MCH1 receptor;

(b) determining whether the activation of the human MCH1 receptor is reduced in the presence of the plurality of compounds, relative to the activation of the human MCH1 receptor in the absence of the plurality of compounds; and if so

(c) separately determining the inhibition of activation of the human MCH1 receptor for each compound included in the plurality of compounds, so as to thereby identify the compound which inhibits the activation of the human MCH1 receptor;

wherein the human MCH1 receptor is an isolated nucleic acid consisting essentially of a nucleic acid encoding a human MCH1 receptor containing consecutive amino acids, the sequence of which is identical to the sequence of the human MCH1 receptor encoded by the consecutive nucleotides having a sequence beginning with the start codon at positions 1-3, or the start codon at positions 16-18, and ending at the stop codon at positions 1267-1269 as indicated in Figure 1 (SEQ ID NO: 1) and which is activated by melanin concentrating hormone.

175. A process for preparing a pharmaceutical composition which comprises admixing a pharmaceutically acceptable carrier and a therapeutically effective amount of a chemical compound identified by the process of any of claims 169, 170, or 172.

176. The process of any of claims 169, 170 or 172, wherein the cell is an insect cell.

177. The process of claim 176, wherein the insect cell is an Sf9, an Sf21, or a High Five cell.

178. The process of any of claims 169, 170 or 172, wherein the cell is a mammalian cell.

179. The process of claim 177, wherein the mammalian cell is nonneuronal in origin.

180. The process of claim 177, wherein the nonneuronal cell is a COS-7 cell, a CHO cell, a 293 human embryonic kidney cell, an NIH-3T3 cell, a mouse Y1 cell, or an LM(tk-) cell.